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Dairy Production

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BUREAU OF AGRICULTURAL ECONOMICS

UNITED STATES DEPARTMENT OF AGRICULTURE

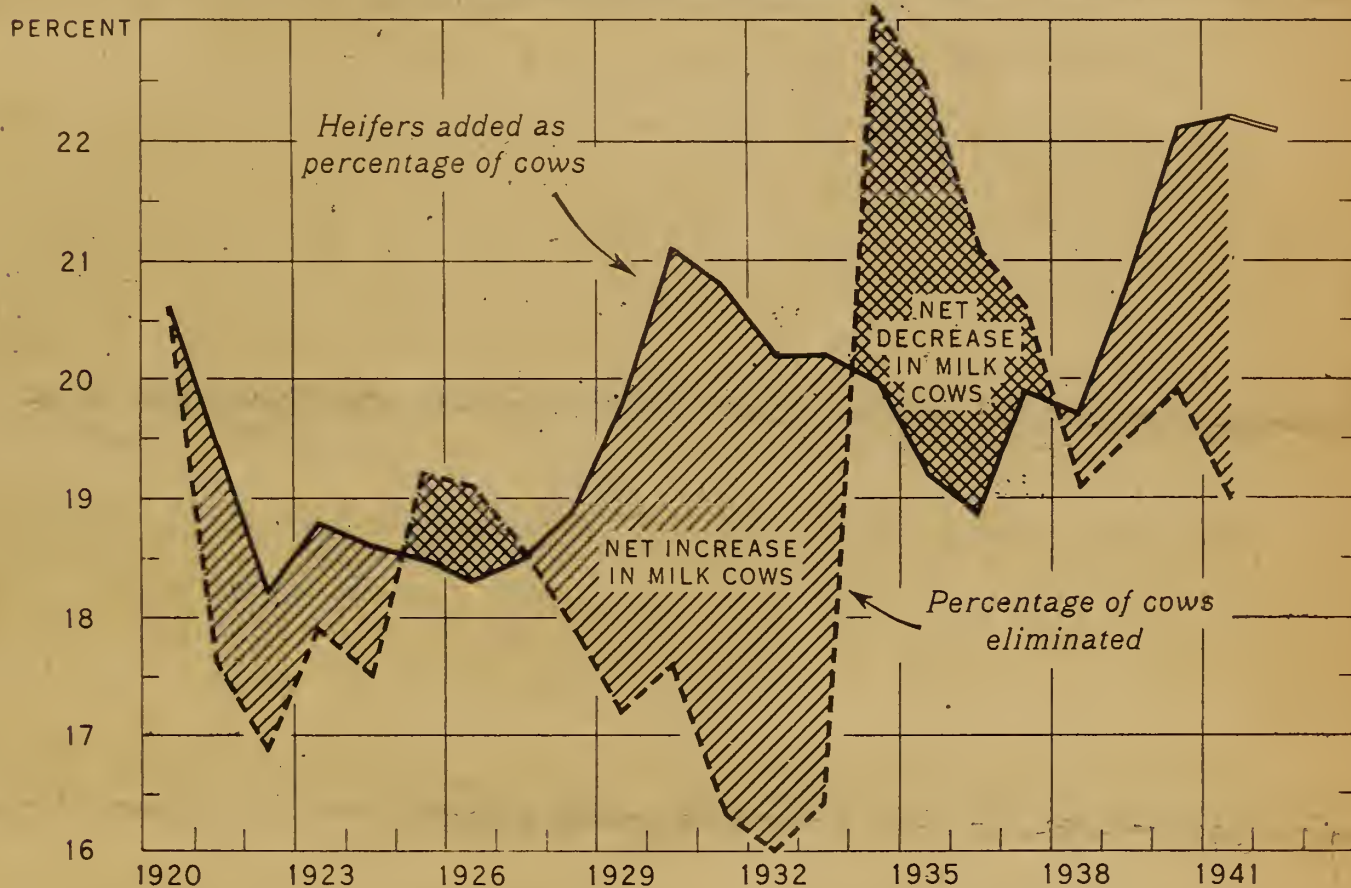
No. 23

BAE

MARCH 26, 1942

HEIFERS ADDED TO AND COWS ELIMINATED FROM MILKING HERDS DURING EACH YEAR, UNITED STATES, 1920-41

(SHOWN AS PERCENTAGES OF NUMBER OF MILK COWS AND HEIFERS 2 YEARS OLD AND OVER AT BEGINNING OF YEAR)



U. S. DEPARTMENT OF AGRICULTURE

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BUREAU OF AGRICULTURAL ECONOMICS

THE NUMBER OF MILK COWS INCREASES WHENEVER THE NUMBER OF HEIFERS THAT BECOME MILK COWS EXCEEDS THE NUMBER OF MILK COWS ELIMINATED FROM THE HERDS BY DEATH LOSSES AND CULLING. ADDITIONS AND CULLING ARE DETERMINED BY QUITE DIFFERENT CONDITIONS, AS SHOWN ON PAGES 8 TO 10.

RECENT INCREASES IN THE NUMBER OF MILK COWS HAVE RESULTED CHIEFLY FROM THE RAISING OF AN UNUSUALLY LARGE NUMBER OF HEIFERS. THE RECORD NUMBER OF HEIFERS AND HEIFER CALVES NOW ON HAND WOULD PERMIT THE RAPID INCREASE IN MILK COWS TO CONTINUE THROUGH 1943 EVEN WITH NORMAL CULLING. FURTHERMORE, PRESENT INDICATIONS ARE THAT DAIRYMEN WILL SAVE A VERY LARGE NUMBER OF HEIFER CALVES AGAIN THIS SPRING, DISREGARDING THE PROBABILITY THAT THERE ARE LIKELY TO BE MARKED CHANGES IN THE RELATIVE PRICES OF CATTLE AND FEED BEFORE THIS YEAR'S CALVES CAN BECOME COWS.

DAIRY PRODUCTION SUMMARY

On the surface, current reports on dairy production, manufactures, and prices seem to show little change from recent months. Fundamental factors, however, appear to be working against an extended continuation of the present high level of returns. Costs are rising. Dairymen are confronted with increasing competition for feed and for labor. Prices of dairy products seem high but they have been slipping back in comparison with prices of other farm products, and seem likely to slip farther. Price relations are least favorable for dairymen who sell cream for making butter.

Comparing prices now with those of a year ago and using rough approximations where definite information is lacking, farmers seem to be receiving about 15 percent more for butterfat and possibly 30 percent more for milk, but the price of feed grain is up about 40 percent, commercial feeds at wholesale are up 55 percent, hay at the farms perhaps 35 percent, milk cows 30 percent and farm wage rates at last report 34 percent. Beef, veal, lambs and chickens, which were fairly high a year ago, have recently been higher by 18 to 24 percent and hogs and eggs by more than 60 percent.

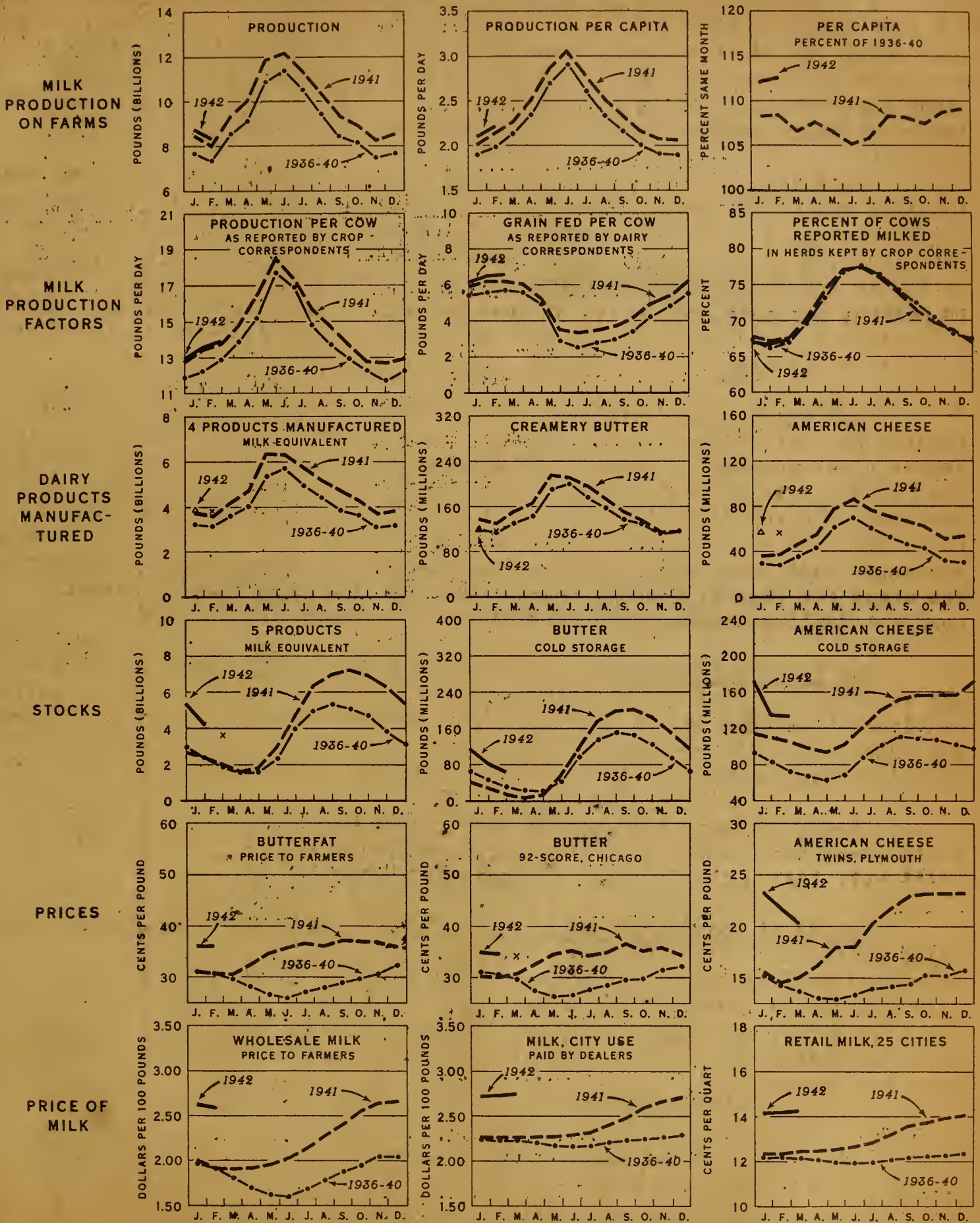
Milk production continues at a record level for this season. With about 3 percent more milk cows on farms than a year ago milk production in February was up about 4 percent. The high production per cow appears to be due primarily to liberal feeding. Compared with the 1936-40 average for the date, the reported milk production per cow on March 1 was up about 1 pound per day, or 8 percent. Dairy correspondents at that time were feeding about .9 pound more grain per head, an increase of 15 percent. In butterfat areas the rate of feeding seems likely to show more than the usual seasonal decline unless price conditions become more favorable.

The total production of manufactured dairy products continues high and is utilizing most of the increase in milk production. Butter production continues light but is likely to be relatively heavier next summer. Cheese and evaporated milk production have been outstandingly heavy but may not show the usual percentage of increase as the season advances.

Stocks of dairy products in sight have continued to decline but are still about twice the 5-year average. Commercial stocks of butter are still very large--the largest on record for March 1.

Prices of dairy products have edged downward about seasonally. Notwithstanding the recent decline, the price of American cheese is still up nearly 50 percent above the 1936-40 average for March compared with increases of 23 percent in milk for city distribution and 16 percent for butter. Shifts in production should ultimately bring these prices closer to their normal relation to each other but progress seems likely to be slow for some months at least.

DAIRY STATISTICS: GRAPHIC SUMMARY FOR THE UNITED STATES



* APPROXIMATION BASED ON INFORMATION AVAILABLE TO ABOUT 12TH OF CURRENT MONTH

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

Dairy Production

March 25, 1942

SUMMARY OF DAIRY STATISTICS FOR THE UNITED STATES

| | | | Average 1935-39 or 1936-40 | 1940 or 1941 | 1941 or 1942 | |
|--|------------|--|-------------------------------------|---------------------|---------------------|--------------------------|
| | | | | | Total or average | Percent of prev. year |
| MILK PRODUCTION ON FARMS: | | | | | | |
| Total, per month..... mil.lb. | Dec. | | 7,437 | 7,961 | 8,466 | 106.3 |
| | Jan. | | 7,549 | 8,362 | 8,726 ^{a/} | 104.4 |
| | Feb. | | 7,245 | 7,935 | 8,288 ^{a/} | 104.4 |
| Per capita, daily average..... lb. | Jan. | | 1.876 | 2.033 | 2.104 ^{a/} | 103.5 |
| | Feb. | | 1.964 | 2.136 | 2.211 ^{a/} | 103.5 |
| Per cow, per day..... lb. | Jan. 1 | | 11.94 | 12.78 | 12.95 | 101.3 |
| (As reported by crop correspondents) | Feb. 1 | | 12.26 | 13.46 | 13.55 | 100.7 |
| | Mar. 1 | | 12.93 | 13.77 | 13.95 | 101.3 |
| GRAIN FED PER COW | lb. Feb. 1 | | 5.61 | 6.18 | 6.53 | 105.7 |
| (as reported by dairy correspondents) | Mar. 1 | | 5.70 | 6.20 | 6.58 ^{c/} | 106.1 |
| PRODUCTION OF MANUFACTURED DAIRY PRODUCTS: | | | | | | |
| Creamery butter, monthly..... mil.lb. | Jan. | | 119.0 | 135.6 ^{b/} | 121.4 ^{b/} | 89.5 |
| | Feb. | | 115.3 | 130.1 | 117.4 ^{a/} | 90.2 |
| weekly..... week ending | Mar. 5 | | --- | --- | --- | 90.0 |
| American cheese, monthly..... mil. lb. | Jan. | | 30.0 | 36.9 | 56.1 ^{b/} | 152.0 |
| | Feb. | | 29.6 | 37.1 | 57.4 ^{a/} | 154.7 |
| weekly..... week ending | Mar. 5 | | --- | --- | --- | 150.3 |
| Evaporated milk, case..... mil.lb. | Dec. | | 114.8 | 148.6 | 286.7 ^{b/} | 192.9 |
| | Jan. | | 130.6 | 170.9 | 311.0 | 182.0 |
| 4 products, milk equivalent..... mil.lb. | Dec. | | 3,040 | 3,502 | 3,815 | 108.9 |
| (Creamery butter x 21, all cheese except | Jan. | | 3,210 | 3,736 | 3,939 | 105.4 |
| skim x 10, canned cond. & evap. milk x 2.2) | Feb. | | 3,138 | 3,617 | --- | 106.3 ^{c/} |
| STOCKS ON HAND: | | | | | | |
| Butter in cold storage..... mil.lb. | Feb. 1 | | 47.2 | 29.7 | 83.1 | 279.8 |
| (Including government holdings) | Mar. 1 | | 32.2 | 16.5 | 63.7 | 386.1 |
| Commercial holdings, only..... | Mar. 1 | | 15.1 | 15.0 | 52.0 | 346.7 |
| American cheese..... mil.lb. | Feb. 1 | | 82.6 | 109.8 | 137.3 | 125.0 |
| (Cold storage holdings) | Mar. 1 | | 73.4 | 105.2 | 132.3 | 125.8 |
| Evaporated milk, case..... mil.lb. | Jan. 1 | | 180.9 | 187.7 | 328.5 | 175.0 |
| (Manufacturers' stocks) | Feb. 1 | | 147.7 | 189.2 | 252.5 | 133.5 |
| 5 products, milk equivalent..... mil.lb. | Jan. 1 | | 2,974 | 2,686 | 5,381 | 200.3 |
| (Butter, all cheese, canned cond. & evap. | Feb. 1 | | 2,372 | 2,374 | 4,168 | 175.6 |
| milk plus cream in cold storage) | Mar. 1 | | 1,873 | 1,988 | 3,653 ^{c/} | 183.8 |
| PRICES: | | | | | | |
| Butterfat, per pound..... ct. | Jan. 15 | | 31.3 | 31.1 | 36.3 | 116.7 |
| (Prices received by farmers) | Feb. 15 | | 30.8 | 30.5 | 36.2 | 118.7 |
| Butter, wholesale, per pound..... ct. | Feb. | | 30.72 | 30.07 | 34.48 | 114.7 |
| (92 score, Chicago) | Mar. | | 29.44 | 30.79 | 34.25 ^{e/} | 111.2 |
| American cheese, wholesale, per pound..... ct. | Feb. 15 | | 14.30 | 14.50 | 21.75 | 150.0 |
| (Twins, Plymouth, Wisconsin) | Mar. 15 | | 13.70 | 15.00 | 20.25 | 135.0 |
| Milk, wholesale, per 100 pounds..... dol. | Jan. 15 | | 1.97 | 2.00 | 2.64 ^{b/} | 132.0 |
| (All purposes, prices received by farmers) | Feb. 15 | | 1.91 | 1.91 | 2.59 ^{a/} | 135.6 |
| Milk for city distribution, per 100 lbs. | Feb. | | 2.23 | 2.26 | 2.74 | 121.2 |
| (Prices paid by dealers, 3.5% basis) | Mar. | | 2.23 | 2.26 | 2.75 ^{a/} | 121.7 |
| Milk, retail delivered, per quart..... ct. | Feb. | | 12.19 | 12.33 | 14.23 ^{b/} | 115.4 |
| (Average, 25 markets) | Mar. | | 12.15 | 12.45 | 14.26 ^{a/} | 114.2 |

^{a/} Preliminary. ^{b/} Preliminary revision. ^{c/} Forecast or interpolation.
^{d/} Not available when accompanying chart was prepared. ^{e/} Price March 13.

MILK PRODUCTION ON FARMS

With the number of milk cows on farms increasing steadily, and milk production per cow swinging upward seasonally at a level somewhat above that a year ago, total milk production continued through February this year at record high levels for the month. With prices of most dairy products higher than for some years, farmers in the more important dairy areas have been feeding their milk cows liberally, and milking a larger proportion of the milk cows in their herds than is usual for this season of the year.

For the month of February, milk production in the United States is estimated at 8.3 billion pounds, more than 4 percent higher than in the same month last year. In relation to the number of people in this country, milk production in February 1942 was the highest for the month in more than a dozen years. The daily average per capita production of 2.21 pounds exceeded by nearly 3 percent the previous high for the month in 1932, a year of unusually heavy winter milk production.

MONTHLY MILK PRODUCTION ON FARMS, UNITED STATES 1936-40 Average, 1941, and 1942

| Month | Monthly Total | | | | Daily Average per Capita | | | |
|-----------------|----------------|---------|--------|-------|--------------------------|-------|-------|------|
| | Average: | | | | Average: | | | |
| | 1936-40: | 1941 | 1942 | 1942 | 1936-40: | 1941 | 1942 | 1942 |
| | Million pounds | | | Pct. | Pounds | | | |
| January | 7,549 | 8,362 | 8,726 | 104 | 1.876 | 2.033 | 2.104 | |
| February | 7,245 | 7,935 | 8,288 | 104 | 1.964 | 2.136 | 2.211 | |
| Jan.-Feb. Incl. | 14,794 | 16,297 | 17,014 | 104.4 | 1.918 | 2.082 | 2.155 | |
| March | 8,462 | 9,240 | | | 2.101 | 2.245 | | |
| April | 9,004 | 9,921 | | | 2.308 | 2.489 | | |
| May | 10,741 | 11,711 | | | 2.664 | 2.842 | | |
| June | 11,203 | 12,058 | | | 2.869 | 3.021 | | |
| July | 10,395 | 11,250 | | | 2.575 | 2.725 | | |
| August | 9,284 | 10,279 | | | 2.298 | 2.489 | | |
| September | 8,348 | 9,240 | | | 2.134 | 2.310 | | |
| October | 8,042 | 8,836 | | | 1.987 | 2.135 | | |
| November | 7,369 | 8,200 | | | 1.880 | 2.046 | | |
| December | 7,585 | 8,466 | | | 1.872 | 2.043 | | |
| Yearly Total | 105,227 | 115,498 | | | 2.211 | 2.377 | | |

MILK PRODUCTION PER COW

Milk production per cow on March 1 was the largest reported by crop correspondents in 18 years of record, despite somewhat less than the usual seasonal increase during February. Production per cow averaged well above the 1931-40 average for March 1 in all major groups of States except the South Central.

Production per cow was especially high in the important Northern commercial dairy area. In Wisconsin and New York, production per cow in herds kept by crop correspondents was substantially higher than on any previous March 1. In most of the other Northern States east of the Great Plains, production per cow was not far below previous high records for March 1. The quantity of grain and concentrates fed per milk cow was the most liberal for the date in any recent year according to reports from dairy correspondents in New England, New York, New Jersey, Pennsylvania, Maryland, Delaware, and Wisconsin, the States in which current monthly reports on rate of feeding are available. In the eastern part of this area cold weather in February might partially explain the relatively heavy feeding, but in the western Lake Area and upper Mississippi Valley, temperatures have been above normal and farmers have obviously been forcing their cows in response to unusually high prices for dairy products. In the North Atlantic States,

the percentage of milk cows milked on March 1 averaged higher than previously reported for the date in the 18-year period for which records are available, and in the East North Central States the percentage milked this March 1 has been exceeded only once.

In the Gulf Coast States, unseasonably low temperatures have slowed pasture development, and rainy weather has been relatively unfavorable for milk cows. Production per cow milked in this area on March 1 was somewhat above the average of recent years, but the low percentage of cows in milk reduced the average output per milk cow in herd considerably below average for March 1. In the Western group of States, the unusually cold weather during February resulted in much less than the usual seasonal increase in milk production per cow and the March 1 average was 4 percent lower than last year. However, the level of production per cow was higher than on the same date of any year prior to 1941.

For the country as a whole, milk production per cow in herds kept by crop correspondents averaged 13.95 pounds on March 1 compared to 13.77 pounds on the same date a year ago and the 1931-40 average of 12.75 pounds for the date. In these herds, 67.5 percent of the milk cows were reported in production, about the same as on this date in the past 3 years, but higher than in any other year back through 1925.

RECENT PRICE CHANGES AND THEIR SIGNIFICANCE

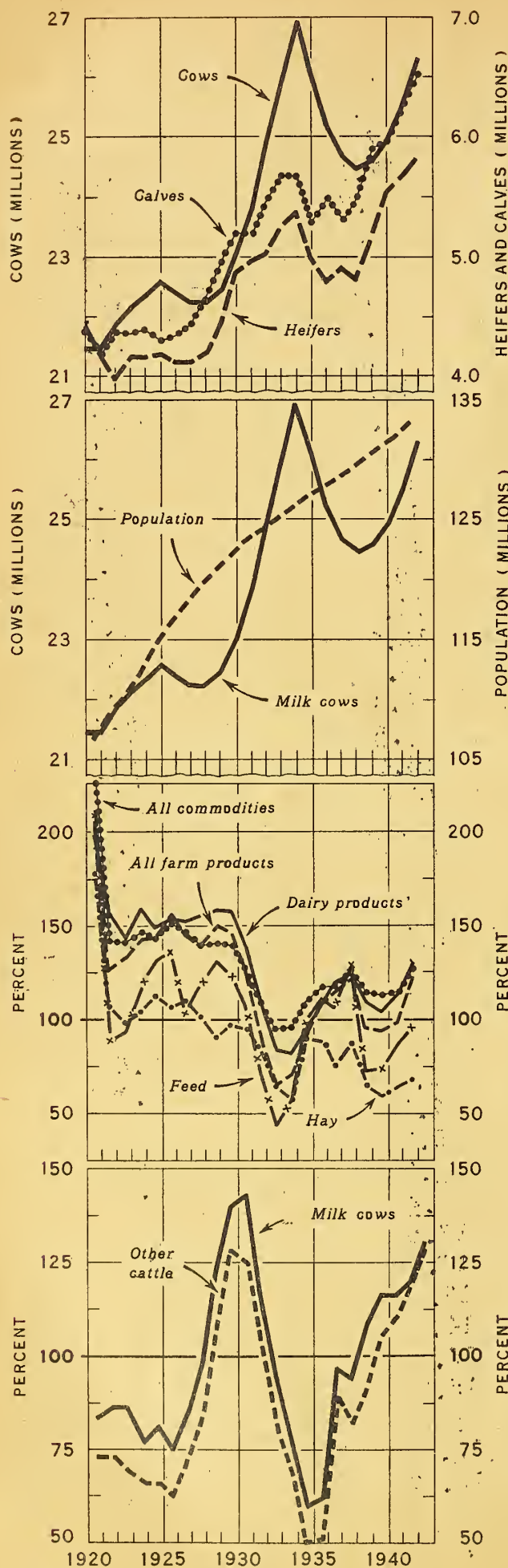
Since June of last year, the price of butterfat has been declining relative to the price of feed grains. By mid-March the price of butterfat was probably lower compared to grains than in March of other years since 1920 except just after the short corn crops of 1924, 1934, and 1936 were harvested. Butterfat appears to be nearly as low compared to the price of beef cattle as the average at this season during the last 3 years and lower than in March of other years back through 1910 when monthly price estimates were started. Compared with the price of hogs, butterfat appears to be lower than at this season in any of the past 30 years except 1917 and 1918, during the last war. Unless consumers can be persuaded to pay a higher price per pound for an increasing supply of butter no real remedy for these unfavorable price relations is immediately in prospect for farmers selling sour cream. In the western Corn Belt States, the principal butterfat producing area, the number of milk cows is increasing and, with the exception of Minnesota, numbers are not yet above the pre-drought peak, but butterfat at 35 cents per pound cannot long compete with hogs at 13 cents per pound. Farmers in this area are increasing hogs and beef cattle much more rapidly than they are increasing milk cows and some shifting towards less intensive dairying seems likely, with lower production per cow tending to offset the increase in the number of milk cows.

In most cheese and condensery areas prices have declined moderately in the last few months due to reduction in the paying prices of the U.S.D.A. for Lend Lease products but prices are still high and conditions call for full steam ahead where adequate manufacturing facilities are available. Conditions also appear favorable in areas producing dry skim milk. Market milk areas, which suffered the least during the years of low prices, have been helped by the higher prices obtained for the surplus milk sold for manufacturing purposes, but they are now being increasingly affected by the movement of labor from the farms to the factories, by the rising cost of feed and by the slowness of market milk prices to respond to increased costs. As we tighten our belts for war, conditions seem likely to become rather less favorable for dairying, although Lend-Lease shipments should help to maintain prices at a more favorable relation to costs than they were during World War I.

MILK PRODUCED PER MILK COW 1/

| State and Div. | MARCH 1 | | | |
|----------------------|---------|-------|-------|-------|
| | Average | | | |
| | 1931-40 | 1940 | 1941 | 1942 |
| | Pounds | | | |
| Me. | 12.4 | 13.2 | 13.5 | 13.1 |
| N.H. | 14.4 | 14.9 | 13.5 | 15.0 |
| Vt. | 13.5 | 14.1 | 14.0 | 14.8 |
| Mass. | 17.2 | 17.3 | 17.9 | 18.0 |
| Conn. | 17.0 | 17.2 | 17.1 | 18.4 |
| N.Y. | 15.5 | 17.0 | 16.7 | 18.0 |
| N.J. | 18.8 | 19.3 | 19.1 | 20.6 |
| Pa. | 16.2 | 16.9 | 16.9 | 17.7 |
| N. ATL. | 15.81 | 16.75 | 16.56 | 17.71 |
| Ohio | 14.2 | 14.7 | 14.7 | 14.9 |
| Ind. | 12.9 | 13.8 | 13.8 | 14.0 |
| Ill. | 14.1 | 15.1 | 15.2 | 15.2 |
| Mich. | 16.3 | 17.0 | 18.0 | 17.3 |
| Wis. | 15.9 | 16.8 | 17.2 | 18.2 |
| E.N.CENT. | 14.94 | 15.76 | 16.07 | 16.56 |
| Minn. | 16.9 | 18.7 | 18.9 | 18.5 |
| Iowa | 14.2 | 16.0 | 15.7 | 15.6 |
| Mo. | 8.6 | 9.2 | 9.1 | 9.4 |
| N.Dak. | 11.7 | 14.2 | 14.8 | 14.1 |
| S.Dak. | 10.8 | 12.7 | 12.0 | 12.5 |
| Nebr. | 12.9 | 13.8 | 13.5 | 12.9 |
| Kans. | 13.2 | 13.4 | 14.4 | 14.3 |
| W.N.CENT. | 13.06 | 14.65 | 14.55 | 14.24 |
| Md. | 13.4 | 15.6 | 15.4 | 15.4 |
| Va. | 9.5 | 10.0 | 10.4 | 10.8 |
| W.Va. | 8.5 | 8.2 | 8.4 | 9.4 |
| N.C. | 9.9 | 10.7 | 10.6 | 10.7 |
| S.C. | 9.3 | 9.6 | 9.8 | 9.7 |
| Ga. | 8.1 | 8.5 | 8.6 | 8.1 |
| S. ATL. | 9.66 | 10.38 | 10.47 | 10.89 |
| Ky. | 9.2 | 9.6 | 9.9 | 10.2 |
| Tenn. | 8.2 | 8.6 | 8.9 | 8.8 |
| Ala. | 7.2 | 7.4 | 7.7 | 7.6 |
| Miss. | 6.3 | 5.4 | 5.8 | 6.1 |
| Ark. | 7.0 | 7.0 | 7.7 | 7.1 |
| Okla. | 9.5 | 9.5 | 9.7 | 9.2 |
| Tex. | 8.4 | 7.8 | 7.9 | 7.7 |
| S.CENT. | 8.09 | 8.08 | 8.46 | 8.34 |
| Mont. | 11.7 | 12.2 | 13.5 | 12.1 |
| Idaho | 15.7 | 16.4 | 16.7 | 15.4 |
| Wyo. | 11.3 | 12.6 | 12.7 | 12.0 |
| Colo. | 12.8 | 13.7 | 14.6 | 13.7 |
| Wash. | 15.4 | 16.2 | 16.7 | 16.6 |
| Oreg. | 13.8 | 14.7 | 15.2 | 15.0 |
| Calif. | 17.7 | 17.3 | 18.4 | 18.1 |
| West. | 14.22 | 15.19 | 15.88 | 15.29 |
| U.S. | 12.75 | 13.62 | 13.77 | 13.95 |

1/ Averages represent the reported daily milk production of herds kept by reporters divided by the total number of milk cows (in milk or dry) in these herds. Figures for New England States are based on combined returns from crop and special dairy reporters. Figures for other States, regions, and U. S. are based on returns from crop reporters only. The regional averages are based in part on records of less important dairy States not shown separately, as follows: North Atlantic, Rhode Island; South Atlantic, Delaware and Florida; South Central, Louisiana; Western, New Mexico, Arizona, Utah and Nevada.



U. S. DEPARTMENT OF AGRICULTURE

MILK COWS, HEIFERS, AND HEIFER CALVES KEPT FOR MILK COWS: NUMBERS ON FARMS, JANUARY 1, UNITED STATES, 1920-42

THE NUMBER OF YEARLING HEIFERS ON HAND JANUARY 1 AND BEING KEPT FOR MILK COWS HAS AVERAGED A LITTLE LESS THAN ONE-FIFTH OF THE NUMBER OF MILK COWS 2 YEARS OLD AND OVER. THIS PROPORTION HAS BEEN ENOUGH TO OFFSET ANNUAL CULLING AND DEATH LOSSES AND PROVIDE FOR THE GRADUAL INCREASE IN MILKING HERDS. THIS YEAR, AS IN 1940 AND 1941, THE NUMBER OF YEARLING HEIFERS ON HAND IS LARGER IN PROPORTION TO THE NUMBER OF COWS THAN IN ANY OF THE 20 YEARS PRIOR TO 1940. THE NUMBER OF 1941 HEIFER CALVES BEING RAISED FOR MILK COWS IS ALSO VERY LARGE AND WITH GOOD CROPS THIS YEAR A LARGE NUMBER OF 1942 CALVES WILL PROBABLY BE RAISED.

EXCEPT DURING DROUGHT PERIODS, USUALLY ABOUT 95 PERCENT OF THE HEIFER CALVES APPEARING IN ONE JANUARY INVENTORY AS BEING KEPT FOR MILK COWS ARE ON HAND A YEAR LATER AS HEIFERS 1-2 YEARS OLD, KEPT FOR MILK COWS. MOST OF THEM BECOME MILK COWS BEFORE THEY ARE 3 YEARS OLD. AS THE HEIFER CALVES NOW BEING RAISED FOR MILK COWS COME INTO PRODUCTION THE NUMBER OF MILK COWS WILL CONTINUE TO INCREASE UNLESS CULLING IS ALMOST AS HEAVY AS IT WAS AFTER THE DROUGHT OF 1934.

MILK COWS AND POPULATION

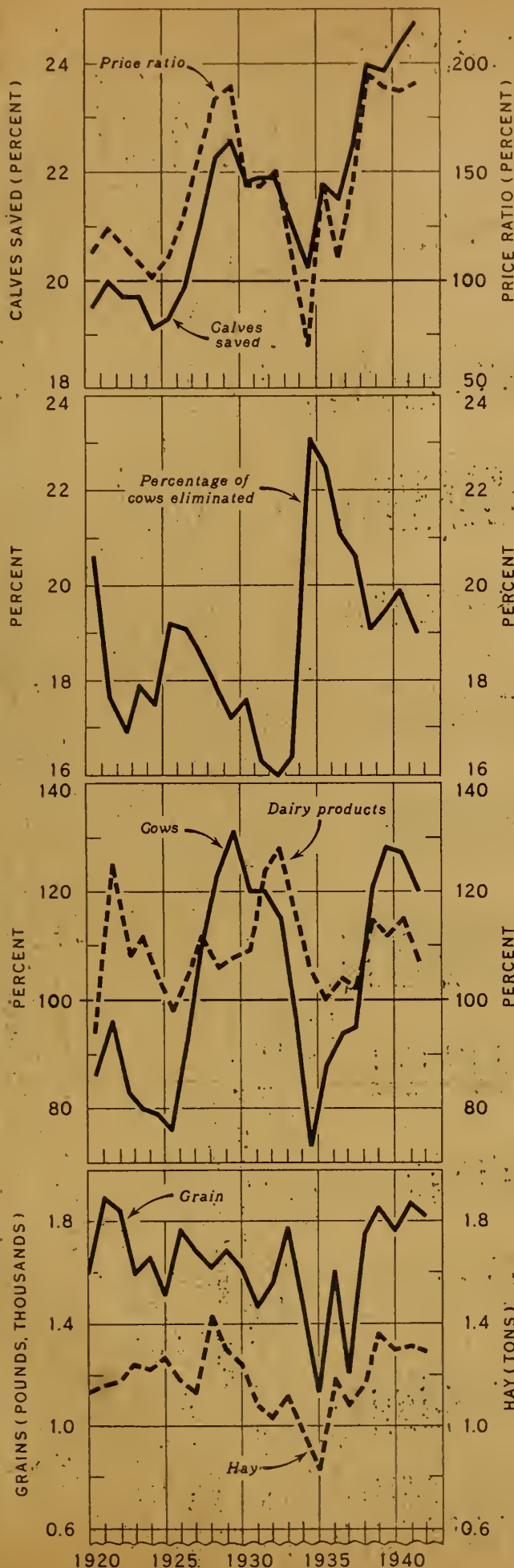
THERE HAS USUALLY BEEN NEARLY ONE MILK COW FOR EACH 5 PEOPLE IN THE UNITED STATES, OR ABOUT ONE PER FAMILY BUT AS MILK PRODUCTION PER COW HAS INCREASED OVER A LONG PERIOD OF YEARS THE NUMBER OF COWS NEEDED PER 100 PEOPLE HAS DECLINED. THE PRESENT NUMBER OF MILK COWS IS THE SECOND HIGHEST ON RECORD, BUT IT IS NOT YET UNUSUALLY HIGH IN PROPORTION TO THE POPULATION. HOWEVER, WITH LEASE-LEASE REQUIREMENTS EQUAL TO ABOUT 5 PERCENT OF OUR MILK PRODUCTION ADDED TO OUR NORMAL DOMESTIC CONSUMPTION IT HAS BEEN NECESSARY TO PUSH THE COWS FOR HIGH PRODUCTION--A REQUIREMENT WHICH TENDS TO SUPPORT PRICES FOR DAIRY PRODUCTS AT A HIGH LEVEL RELATIVE TO FEED COSTS. THE 3 PERCENT INCREASE IN MILK COWS IN 1941 AND THE SOMEWHAT SIMILAR INCREASES NOW IN PROSPECT FOR 1942 AND 1943 SHOULD EASE CONSIDERABLY THE NEED FOR MAXIMUM PRODUCTION PER COW. OF COURSE, LEASE-LEASE AND ARMY REQUIREMENTS MAY INCREASE, BUT ALLOWING FOR THE DRAWING OF LABOR FROM THE FARMS AND THE CHANGES IN FOOD HABITS THAT ARE TO BE EXPECTED IN TIME OF WAR, THERE IS NO APPARENT NEED FOR THE RAISING OF A LARGE NUMBER OF HEIFER CALVES IN 1942 FOR FURTHER INCREASING DAIRY HERDS IN 1944 AND 1945.

INDEXES OF ANNUAL PRICES OF DAIRY PRODUCTS, FEED GRAINS, HAY, ALL FARM PRODUCTS AND ALL COMMODITIES: UNITED STATES

THE ADJUSTMENTS MADE BY DAIRYMEN ARE DETERMINED IN PART BY ACTUAL PRICES AND IN PART BY THE RELATION BETWEEN PRICES FOR DIFFERENT PRODUCTS. CHANGES IN THE GENERAL LEVEL OF PRICES EXPLAIN SOME OF THE DIFFERENCES IN RELATIVE PRICES. PRICES OF FEED GRAINS LIKE OTHER RAW MATERIALS THAT CAN BE STORED FOR FUTURE USE, HAVE RISEN AND FALLEN RAPIDLY WITH CHANGES IN THE PRICE LEVEL AND WITH CHANGES IN PROSPECTIVE SUPPLIES. DAIRY PRODUCTS AS A GROUP MOVE MORE DIRECTLY TO CONSUMERS AND THEIR PRICES HAVE USUALLY CHANGED LESS AND MORE SLOWLY. THIS PARTIALLY EXPLAINS WHY THEY WERE HIGH COMPARED WITH OTHER FARM PRODUCTS DURING THE WORST DEPRESSION YEARS AND LOW COMPARED WITH OTHER FARM PRODUCTS IN SOME PERIODS WHEN PRICES WERE RISING. RECENTLY PRODUCERS IN STRICTLY DAIRY AREAS HAVE FELT THE STIMULATING EFFECT OF INCREASES IN PRICES OF DAIRY PRODUCTS WHICH LEAVE A WIDER MARGIN OVER INTEREST, TAXES AND OTHER FIXED COSTS. BUT IN MANY AREAS WHERE MILK COWS COMPETE WITH OTHER LIVESTOCK THE NUMBERS OF HOGS AND BEEF CATTLE SHOW MUCH LARGER PERCENTAGES OF INCREASE THAN DO MILK COWS. SO LONG AS THIS CONTINUES IT MEANS INCREASING COMPETITION FOR THE FEED AND PROBABLY ABOVE AVERAGE CULLING OF MILK COWS.

PURCHASING POWER OF MILK COWS AND OTHER CATTLE, JANUARY 1

THE PROFIT SECURED FROM RAISING DAIRY HEIFER CALVES THIS YEAR WILL DEPEND CONSIDERABLY ON WHAT MILK COWS ARE WORTH IN 1944 AND 1945. THIS WILL DEPEND ON THE GENERAL LEVEL OF PRICES AT THAT TIME AND ON THE RELATION OF THE PRICE OF MILK COWS TO THE GENERAL PRICE LEVEL OR ON "THE PURCHASING POWER" OF MILK COWS. SO FAR AS RECORDS ARE AVAILABLE, PURCHASING POWER OF BOTH MILK COWS AND OTHER CATTLE HAS RISEN AND FALLEN QUITE REGULARLY, REACHING PEAKS ABOUT EVERY 14 TO 16 YEARS. USING THE JANUARY 1 VALUATIONS (WHICH ARE CUSTOMARILY USED FOR THIS PURPOSE BECAUSE THEY ARE COMPARABLE BACK TO THE CIVIL WAR PERIOD) IT IS APPARENT THAT THE PURCHASING POWER OF CATTLE HAS APPROACHED PREVIOUS PEAKS SO THAT A SHARP TURN MAY TAKE PLACE FAIRLY SOON. THE NUMBER OF CATTLE ON FARMS IS ALREADY THE HIGHEST ON RECORD BUT MARKETINGS OF CATTLE HAVE NOT BEEN CORRESPONDINGLY LARGE BECAUSE FARMERS HAVE BEEN HOLDING BACK NEAR-RECORD NUMBERS OF COWS AND HEIFERS TO INCREASE THEIR HERDS. HOW LONG THIS TENDENCY WILL CONTINUE DEPENDS SO MUCH ON THE CONDITION OF RANGES AND ON HAY AND FEED PRODUCTION THAT IT CANNOT BE PREDICTED DEFINITELY BUT, AS SHOWN BY THE CHART ON PAGE 9, THE PRICE OF MILK COWS ALREADY SHOWS SIGNS OF DECLINING IN COMPARISON WITH THE GENERAL LEVEL OF PRICES OF ALL FARM PRODUCTS.



HEIFER CALVES SAVED FOR MILK COWS AND PRICE OF MILK COWS RELATIVE TO VALUE OF FEED

WHEN DAIRYMEN CAN RAISE MILK COWS CHEAPER THAN THEY CAN BUY REPLACEMENTS FOR THEIR HERDS THEY SAVE SOMEWHAT MORE THAN THE USUAL PROPORTION OF THEIR HEIFER CALVES. THE SOLID LINE IN THIS CHART INDICATES THE NUMBER OF HEIFER CALVES THAT FARMERS KEPT TO RAISE FOR MILKING PURPOSES AS A PERCENTAGE OF THE NUMBER OF MILK COWS (2 YEARS OLD OR OVER) ON HAND AT THE END OF EACH YEAR. THE OTHER LINE SHOWS THE AVERAGE PRICE OF MILK COWS DURING THE LAST HALF OF EACH YEAR AS A PERCENTAGE OF THE FARM VALUE OF SUCH FEEDS AS ARE ORDINARILY USED IN RAISING A CALF TO PRODUCING AGE. (THIS WAS TAKEN AS THE VALUE OF 2 TONS OF HAY, 1/2 TON OF FEED GRAIN AND 30 POUNDS OF BUTTERFAT—THE LATTER BEING INCLUDED TO REPRESENT THE VALUE OF THE MILK REQUIRED TO START A CALF.)

PRICES ARE NOW ABOUT AS FAVORABLE FOR RAISING CALVES AS THEY WERE A YEAR AGO AND IT IS PROBABLE THAT DAIRYMEN WILL SAVE A NEAR-RECORD NUMBER THIS SPRING. IT SEEMS PROBABLE, HOWEVER, THAT CONDITIONS WILL SOON BE MUCH LESS FAVORABLE FOR SAVING CALVES.

MILK COWS ELIMINATED DURING YEAR AS PERCENTAGE OF MILK COWS 2 YEARS OLD OR OVER, JANUARY 1

THE PERCENTAGE OF THE COWS ELIMINATED FROM MILKING HERDS, CALCULATED AS SHOWN ON PAGE 10, DECLINES WHEN DAIRYING IS RELATIVELY PROFITABLE AND RISES WHEN FARMERS REDUCE LIVESTOCK BECAUSE OF A SHORTAGE OF FEED OR WHEN FARMERS SHIFT EXTENSIVELY FROM MILK COWS TO BEEF CATTLE, HOGS, OR OTHER KINDS OF FARMING. LOOKING ONLY AT NATIONAL TOTALS, CULLING OF MILK COWS WAS HEAVY IN EARLY 1920 WHEN FEED WAS HIGH, BUT DROPPED SHARPLY WITH THE TREMENDOUS POST-WAR SLUMP IN GRAIN PRICES THAT FOLLOWED AND AVERAGED FAIRLY LOW THROUGH MOST OF THE 1921-26 PERIOD WHEN THE NUMBER OF BEEF CATTLE WAS REDUCED BY 30 PERCENT. THERE WAS, HOWEVER, A TEMPORARY INCREASE IN CULLING DURING 1925 AND 1926, AFTER THE PARTIAL FAILURE OF THE CORN CROP IN 1924 AND WHILE DAIRY PRODUCTS WERE VERY LOW IN PRICE COMPARED TO HOGS. AFTER THE EXCEPTIONAL HAY CROP OF 1927 INTEREST IN CATTLE REVIVED AND, WITH GRAIN PRICES DRAMATICALLY REDUCED BY THE 1929-33 DEPRESSION, THE CULLING OF BOTH MILK COWS AND BEEF COWS CONTINUED ABNORMALLY LOW TILL THE DROUGHTS OF 1934 AND 1936 NECESSITATED LIQUIDATION. MOST OF THE TIME SINCE THE DROUGHT PERIOD DAIRY PRODUCTS HAVE BEEN LOW IN PRICE COMPARED TO CATTLE AND HOGS AND CULLING HAS BEEN AVERAGE OR HIGHER.

PRICES OF MILK COWS AND DAIRY PRODUCTS RELATIVE TO ALL FARM PRODUCTS

DAIRYMEN RAISE MORE THAN THE USUAL PROPORTION OF THEIR HEIFER CALVES FOR REPLACEMENT PURPOSES WHEN THE PRICE OF MILK COWS IS HIGH COMPARED WITH OTHER FARM PRODUCTS, PARTICULARLY WHEN IT IS HIGH COMPARED WITH THE PRICES OF HAY AND GRAIN. THE SOLID LINE IN THIS FIGURE SHOWS WHEN THE PRICE OF COWS WAS HIGH AND WHEN LOW COMPARED WITH OTHER FARM PRODUCTS. WHEN IT IS HIGH, AS IN 1929 AND 1938-41 IT EXPLAINS THE LARGE NUMBER OF CALVES SAVED IN THE CHART AT THE TOP OF THE PAGE.

DAIRYMEN CULL OUT MORE THAN THE USUAL PROPORTION OF THEIR COWS WHEN PRICES OF DAIRY PRODUCTS ARE LOW COMPARED TO OTHER FARM PRODUCTS THAT THEY CAN PRODUCE, PARTICULARLY WHEN THEY ARE LOW IN COMPARISON WITH HOGS AND BEEF CATTLE. THE DOTTED LINE SHOWS WHEN DAIRY PRODUCTS AS A GROUP WERE HIGH OR LOW COMPARED WITH THE OTHER FARM PRODUCTS. WHERE THE LINE IS HIGH, AS FOR EXAMPLE, 1932, IT EXPLAINS A LOW RATE OF CULLING IN THE FIGURE JUST ABOVE.

SUPPLY OF FEED GRAINS AND HAY PER UNIT OF LIVESTOCK

THE GREAT DROUGHTS OF 1934 AND 1936 AND THE FEED SHORTAGES WHICH EXTENDED INTO THE FOLLOWING YEARS NECESSITATED HEAVY REDUCTION IN NUMBERS OF ALL LIVESTOCK AND POULTRY. THE PARTIAL FAILURE OF THE CORN CROP OF 1924 AND THE DROUGHT OF 1930 CAUSED SOME LESSER ADJUSTMENTS. THE POOR HAY CROPS OF 1925 AND 1926 MAY HAVE INCREASED MARKETINGS SOMEWHAT BUT THE EFFECTS OF THE REDUCED HAY SUPPLIES OF THE 1931 TO 1933 PERIOD WERE LARGELY OFFSET BY THE GREAT DROP IN THE PRICES OF FEED GRAIN, WHEAT, AND MANY OTHER FARM PRODUCTS DURING THE DEPRESSION. RECENTLY THE ABUNDANCE OF FEED SUPPLIES IN PROPORTION TO THE NUMBER OF ANIMALS TO BE FED HAS BEEN CAUSING RAPID INCREASES NOT ONLY IN DAIRY HERDS BUT IN TOTAL LIVESTOCK. NUMBERS OF CATTLE, SHEEP AND POULTRY ARE ALREADY THE LARGEST ON RECORD AND STILL INCREASING, AND THE NUMBER OF HOGS MAY EXCEED PREVIOUS PEAKS BEFORE THE END OF THE YEAR. WITH THE PRODUCTION OF GRAIN AND HAY DEPENDENT ON THE WEATHER AND LIMITED BY WARTIME DIFFICULTIES, CONDITIONS CANNOT LONG CONTINUE SO FAVORABLE FOR EXPANDING LIVESTOCK NUMBERS OR THERE WOULD SOON BE MORE LIVESTOCK THAN COULD BE FED. THE LINES ON THIS CHART SHOW HOW THE FISCAL YEAR SUPPLIES (PRODUCTION PLUS CARRYOVER) OF FEED GRAIN AND HAY HAVE COMPARED WITH THE NUMBER OF LIVESTOCK ON JANUARY 1, COUNTING 1 MILK COW OR THE EQUIVALENT IN OTHER LIVESTOCK AS ONE UNIT.

SOME FACTORS AFFECTING NUMBERS OF MILK COWS: UNITED STATES, 1920-42

| Year | Milk cows 2 + 1 | | Numbers as percentage of milk cows | | Beef Cows | | Price of Milk Cows | | Supply per unit of livestock | | Price of Dairy prod. | | Value of one pound of butterfat | |
|------|-----------------|-------|------------------------------------|------|-----------|------|--------------------|-------|------------------------------|------|----------------------|------|---------------------------------|------|
| | Thous. | Pct. | Pct. | Pct. | Thous. | Pct. | Thous. | Pct. | Thous. | Pct. | Thous. | Pct. | Thous. | Pct. |
| 1920 | 21,455 | 99.6 | 20.6 | 20.4 | 12,525 | 86 | 89.50 | 1,594 | 1.126 | 94 | 22.4 | 4.29 | | |
| 1921 | 21,451 | 100.0 | 19.4 | 19.5 | 12,232 | 96 | 59.10 | 1,886 | 1.164 | 125 | 36.6 | 4.90 | | |
| 1922 | 21,851 | 101.8 | 18.2 | 20.0 | 12,132 | 83 | 53.60 | 1,841 | 1.175 | 108 | 33.0 | 4.36 | | |
| 1923 | 22,138 | 101.3 | 18.3 | 19.7 | 11,374 | 80 | 55.40 | 1,598 | 1.237 | 112 | 31.1 | 6.06 | | |
| 1924 | 22,331 | 100.9 | 18.6 | 19.7 | 11,926 | 79 | 55.50 | 1,657 | 1.217 | 104 | 25.8 | 5.41 | | |
| 1925 | 22,575 | 101.1 | 18.5 | 19.1 | 11,204 | 76 | 57.90 | 1,508 | 1.271 | 98 | 26.0 | 3.85 | | |
| 1926 | 22,410 | 99.3 | 18.3 | 19.3 | 10,294 | 92 | 65.50 | 1,768 | 1.176 | 105 | 34.1 | 3.55 | | |
| 1927 | 22,251 | 99.3 | 18.5 | 19.9 | 9,439 | 109 | 74.20 | 1,685 | 1.129 | 112 | 31.5 | 4.59 | | |
| 1928 | 22,231 | 99.9 | 18.9 | 21.0 | 8,926 | 123 | 89.80 | 1,619 | 1.433 | 106 | 29.3 | 5.26 | | |
| 1929 | 22,440 | 100.9 | 19.8 | 22.3 | 8,997 | 131 | 94.10 | 1,686 | 1.301 | 108 | 30.7 | 4.78 | | |
| 1930 | 23,032 | 102.6 | 21.1 | 22.6 | 9,162 | 120 | 74.20 | 1,624 | 1.249 | 109 | 27.3 | 3.97 | | |
| 1931 | 23,820 | 103.4 | 20.8 | 21.8 | 9,809 | 143 | 51.30 | 1,467 | 1.077 | 124 | 30.2 | 4.31 | | |
| 1932 | 24,896 | 104.5 | 20.2 | 21.9 | 10,439 | 151 | 37.00 | 1,556 | 1.032 | 128 | 34.2 | 5.22 | | |
| 1933 | 25,936 | 104.2 | 20.2 | 21.9 | 11,346 | 113 | 33.20 | 1,775 | 1.115 | 117 | 27.2 | 5.34 | | |
| 1934 | 26,931 | 103.8 | 20.0 | 21.1 | 12,678 | 62 | 32.60 | 1,475 | .992 | 105 | 19.7 | 5.41 | | |
| 1935 | 26,082 | 96.8 | 19.2 | 20.2 | 11,151 | 144 | 46.90 | 1,133 | .834 | 100 | 21.6 | 3.35 | | |
| 1936 | 25,196 | 95.6 | 18.9 | 21.8 | 11,048 | 111 | 52.70 | 1,609 | 1.188 | 104 | 25.6 | 3.54 | | |
| 1937 | 24,649 | 97.8 | 19.9 | 21.5 | 10,682 | 143 | 56.80 | 1,211 | 1.083 | 102 | 21.9 | 3.53 | | |
| 1938 | 24,465 | 93.3 | 19.7 | 22.5 | 10,132 | 195 | 56.70 | 1,749 | 1.160 | 115 | 30.8 | 3.43 | | |
| 1939 | 24,600 | 100.5 | 20.8 | 24.0 | 9,987 | 189 | 58.60 | 1,853 | 1.359 | 112 | 27.8 | 3.83 | | |
| 1940 | 24,926 | 101.3 | 22.1 | 23.9 | 10,629 | 187 | 61.00 | 1,772 | 1.299 | 115 | 27.7 | 5.20 | | |
| 1941 | 25,478 | 102.2 | 22.2 | 24.4 | 11,229 | 191 | 71.70 | 1,869 | 1.311 | 107 | 30.4 | 3.79 | | |
| 1942 | 25,303 | 103.2 | 22.1 | 24.8 | 12,017 | 120 | | 1,820 | 1.291 | | | | | |

1/ Estimated numbers of "cows and heifers 2 years old or over, kept for milk, on farms January 1." Includes recent revisions towards indications of 1940 Census. Numbers are higher than the yearly averages of milk cows on farms as published last month because of inclusion of some 2 year old heifers not in production on January 1.

2/ Numbers on farms January 1 as percent of numbers of milk cows shown in column 1. In making comparisons the heifers are assumed to be "added to the dairy herds" in calendar year when they became 2 years old, and the heifer calves on hand January 1 were assumed to have been "saved" in the previous year. The percentage of milk cows eliminated is computed from the number of cows plus heifers 1-2 at the beginning of the year less the number of cows the following January. As thus computed it includes culling, death losses of cows and heifers and net shifts of animals from milk cow to beef cow classification.

3/ Feed supplies per unit for fiscal year feeding period that includes January of year shown. Computed from previous year's production plus farm stocks, divided by units of livestock on farms January 1.

4/ A high price of butterfat relative to feed grains and hogs indicates only that competitive price conditions were to that extent favorable for dairying in areas producing butterfat and hogs. Nevertheless the percentage of cows culled (shown in col. 5) materially exceeded 19 percent only in years when the price of a pound of butterfat bought less than 50 pounds of feed grain. Culling was light chiefly when butterfat was high in price compared to grain; also in some years when high compared to hogs.